

**Work Order ID 77562****\*77562\***

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December-13-11 1:49:55 PM

Item ID: D6101-003 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Saddle Billet, 7075  
Start Date: 13/12/2011 Start Qty: 40.00 **\*40\*** Cust Item ID:  
Required Date: 05/01/2012 Req'd Qty: 40.00 **\*40\*** Customer:  
Reference:

Approvals: Process Plan: M.C.J. Date: 11/12/13 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6101	Rev B								
100	PURCHASING	0.00							
<b>*100*</b>									
Purchasing	Memo	0.00							
Purchasing	Issue P/O: <u>15703</u>								
	a) Description: Alluminum billet								
	b) 7.875" x 6.250" x 2.00" thick								
	c) Tolerance on all dimensions are +0.030"/-0.000"								
	d) Grain direction along 7.875" length								
	e) Material: 7075-T7351 (QQ-A-250/12)								
	f) Material certification required								
110	Receive & Inspect for Damage & Mat'l Certs	0.00							
<b>*110*</b>									
Packaging	Memo	0.00							
Packaging	Ensure material certification is attached								

CY 11/12/20 40

12/6/12 (40)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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December-13-11 1:49:55 PM

Item ID: D6101-003 Accept **\*N900040100\*** Setup Start **\*NS1\***  
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Item Name: Saddle Billet, 7075  
Start Date: 13/12/2011 Start Qty: 40.00 **\*40\*** Cust Item ID:  
Required Date: 05/01/2012 Req'd Qty: 40.00 **\*40\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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120	QC6- Inspect dimensions to drawing	0.00							
<b>*120*</b>									
QC	Memo	0.00							
Quality Control	Ensure Material certification comply to Dwg D6101								

130	Identify as per dwg & Stock Location: <u>MT40</u>	0.00							
<b>*130*</b>									
Packaging	Memo	0.00							
Packaging									

140	QC21- Final Inspection - Work Order Release	0.00							
<b>*140*</b>									
QC	Memo	0.00							
Quality Control									

12/1/14  
MF  
12-01-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

# Picklist Print

December-13-11 1:50:00 PM

Page 1

Work Order ID: 77562

**\*77562\***

Parent Item: D6101-003

**\*D6101-003\***

Parent Item Name: Saddle Billet, 7075

Start Date: 13/12/2011

Required Date: 05/01/2012

Start Qty: 40.00

Required Qty: 40.00

Comments: IPP A: 01.05.04New IssueEC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-003P		Purchased	No			110	Each	0.0000	1	40			
<b>*D6101-003P*</b>									<b>**</b>				
7075-T7351 2X6.25X7.875													

*6/2/01/12 (44)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

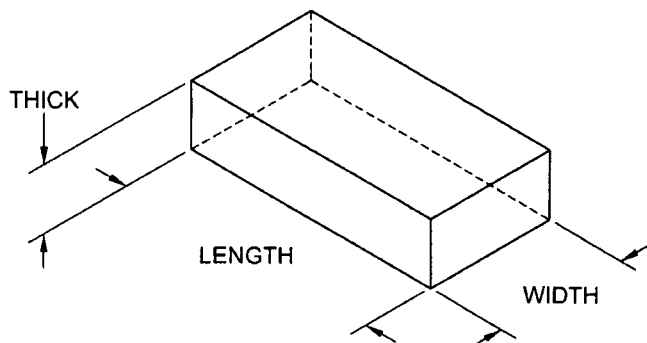
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# SPECIFICATION CONTROL DRAWING



TOP COPY  
 TURN TO  
 INFERING  
 UNCO ROLLED COPY  
 SUBJECT TO AMENDMENT  
 WITHOUT NOTICE  
 WORK ORDER  
 NO. 77862 M.L.S  
 11/12/13

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

**B** ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

**RELEASED**  
09/10/15/WB

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO15703**

Purchase Order Date 12/20/11

PO Print Date 12/20/11

Page Number 1 of 1

**Order From :**

VC-MET001

METAUX CASTLE

A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100

TORONTO, ON M4Y 3A5

CA

**Contact Name**

**Vendor Phone**

514 694 9575

**Vendor Fax**

514 695 3281

**Vendor Account Nbr**

**Buyer**

Chantal Lavoie

**Requisition Nbr**

**Tax Resale Nbr**

10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

Destination-Collect

**Ship To :**

DART AEROSPACE LTD

1270 ABERDEEN

HAWKESBURY, ON K6A 1K7

CANADA

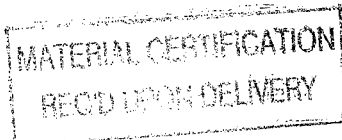
*CL 11/12/11*

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D6101-003P	7075-T7351 2X6.25X7.875	1/06/12 Yes	40.00 Each	Yours ppd	\$59.1600	\$2,366.40

Special Inst: AS PER DWG D6101 REV. B  
B77562  
MATERIAL: 7075-T7351 AS PER QQ-A-  
250/12  
SIZE: 7.875" X 6.250" X 2.00" THICK  
GRAIN DIRECTION ALONG 7.875"  
LENGTH  
TOLERANCE ON ALL DIMENSIONS  
ARE +0.030"/-0.000"

PO Total:

\$2,366.40



Change Nbr: 1

Change Date: 12/20/11

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

**Castle Metals®**

A. M. Castle &amp; Co.

## BORDEREAU DE MARCHANDISES

Page 1 of 2

No de Formulaire d'Emballage / Shipment No:1123462

<b>Expédié de / Ship From:</b> A. M. Castle & Co. KENT 20826 68TH AVENUE SOUTH KENT, WA 98032		<b>Vendu à / Sold To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		<b>Expédié à / Ship To:</b>		<b>Livré à / Deliver To:</b> WILL CALL-MONTREAL 835 SELKIRK AVENUE POINTE CLAIRE, QC H9R 3S2 CA			
<b>Date d'expédition / Date Shipped</b> 03-JAN-2012		<b>F.O.B.</b> ORIGIN		<b>Modalités de transport / Freight Terms</b> Prepaid		<b>Transporteur / Carrier</b> ROADWAY		<b>No du Bon de connaissance / BOL No</b> 1123462-2	

<b>Détails d'expédition / Shipment Details</b>	<b>Destination finale / Final Destination Branch - KEN</b>
--	--

<b>N° de commande / Order No</b> 1902134	<b>N° de ligne / Line No</b> 1	<b>N° d'article / Item No</b> 752237.MO	<b>Description</b> 2.0000.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000 CUT 2SIDED TO 6.25 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 7.875")) X 7.875 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 7.875")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/12		
<b>N° de bon de commande / Purchase Order No</b> 15703		<b>Nbre de pièces / Part Number</b> YOUR ITEM NUMBER: D6101-003		<b>Qté commandée / Ordered Qty</b> 40.00 PCS	<b>Qté Facturée / Invoice Qty</b> 40.0000 PCS

<b>Détails / Details</b>							
<b>N° de livraison / Delivery No :</b> 112353330	<b>Usine / Mill</b>	<b>No de coulée / Heat Number</b> 440514A8	<b>Code méc / Mech Id</b>	<b>Pièces / PCS</b> 40	<b>Largeur (Pouce) / Width (IN)</b>	<b>Longueur (Pouce) / Length (IN)</b>	<b>Qté expédiée / Shipped Qty(LBS)</b> 406.43

Ces marchandises/technologies sont sujettes aux règlements de l'Export Administration et du département d'état des États-Unis. Si elles ont été/sont exportées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des États-Unis est interdite.

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law prohibited.

Date Printed: 11-JAN-2012 01:05:47 PM

SHIP TO:  
 CASTLE METALS  
 C/O CUTTER PRECISION METALS  
 1208 NO. 4TH AVE  
 KENT, WA 98032

**KAISER  
 ALUMINUM**

Trentwood Works - Spokane, WA 99215  
 Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number  
 4132897

SOLD TO:  
 AM CASTLE & CO- SOLD TO  
 3400 NO. WOLF ROAD  
 FRANKLIN PARK, IL 60131

CUSTOMER PO NUMBER: 45-24903		WORK PACKAGE:	CUSTOMER PART NUMBER: 6857 A97075-60		SHIP RUN/LOAD ID: 101310/6	GOV'T CONTRACT NUMBER:
KAISER ORDER NO: 1068621	LINE ITEM: 1	SHIP DATE: 20-JUN-2008	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: MILL FINISH PLATE
WEIGHT SHIPPED: 4314 LB	QUANTITY: 3 PCS EST.	B/L NUMBER: 2018273	GAUGE: 2.0000 IN	WIDTH: 48.500 IN	LENGTH: 44.500 IN	

### Certified Specifications

AMS 4078/RevG  
 ASTM B 209/Rev07  
 BSS 7055/RevA  
 DPS 4.713/RevAH  
 GSS16100/RevG

AMS-QQ-A-250/12  
 ASTM B 594/Rev06  
 CMMP Q25/RevR  
 EAC MS1011/RevE  
 MMS 159/RevN

AMS-STD-2154  
 BAC 5439/RevH  
 CSTI 006/RevC  
 GAMPS 9101/RevB  
 PS 21211/RevK

Test Code: 4297

### Test Results

Lot: 440514A8 Cast 170

Drop 21

Ingot 5

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	74.7 : 74.8 (515 : 516)	62.4 : 62.8 (430 : 433)	11.6 : 11.9

(ASTM E1004)

Conductivity %IACS :	40.4 Min	40.5 Max
(MS/M) :	23.4 Min	23.5 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.09	0.16	1.5	0.03	2.5	0.20	5.7	0.03	0.01	0.01	TOT 0.04

### ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

# KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number  
4132897

### TEST NOTES

Metal represented by this test report was immersion  
ultrasonically tested from one side and meets the Class A  
and Class B requirements of all specifications referenced  
on this test report.

CASTLE METALS - KENT	
DATE REC'D <u>6-26-08</u>	CUST. _____
REC'D FROM <u>KAISER</u>	CUST. P.O. _____
APPROVED BY <u>AM</u>	AMC S/O _____
TR # <u>44051448</u>	
WE HEREBY CERTIFY THAT THESE ARE CORRECT COPIES OF REPORTS NOW ON FILE AT A.M. CASTLE & CO. BY: <u>AM</u> <u>JAC: 0657</u>	

### CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE U.S.A OR CANADA AND MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR

